

CLAIMS

What is claimed is:

- 5 1. A lamp and projection device comprising:
- a lamp body consisting of six substantially identical
 and modular interlocking faces assembled to form a
 cube;
- 10 a hinged top face lid with interior mirrored surface
 capable of reflecting and projecting an image at
 various angles from vertical to horizontal;
- 15 support structure for holding an imaging device and
 parts of the illumination system;
- a projection system consisting of at least one lamp or
 light-emitting unit, a plurality of reflecting mirrors,
20 at least one moveable condensing lens, and an
 electrical transformer and switch.
2. The lamp and projection device according to claim 1
 where said imaging device is a removable single slide
- 25 3. The lamp and projection device according to claim 1
 where said imaging device is a digital means, such as a
 transparent LCD panel, LCOS panel, Digital micro-mirror
 or other digital imaging light engine
- 30 4. The lamp and projection device according to claims 1 to
 3 where said faces are identical and contain recesses

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and protrusions at opposed edges such that they can be assembled by rotating appropriately and interlocked with similar parts in a cube arrangement.

5 5. The lamp and projection device according to Claims 1 to
claim 4 where said faces contain an internal support
structure of struts and grooves for fixing the parts of
the illumination system where such grooves support
various parts or are not used depending on their
10 rotation and position as a cube face.

6. The lamp and projection device according to Claims 1 to
5 where said faces are formed from a semi-translucent
material so as to provide soft illumination through the
15 cube faces, and easily formed by injection moulding
means.

7. The lamp and projection device according to Claims 1 to
6 where a micro-switch is used to turn the device on or
20 off as the top hinged lid is opened

8. The lamp and projection device according to Claims 1 to
7 whereby a folded and punched metal sheet is used to
support the bulb unit and provide suitable heat
25 dispersion and venting.

9. The lamp and projection device according to Claims 1 to
8 where said cube faces contain recessed grooves
suitable for being punched through during manufacture
or during installation to create holes or grooves
30 suitable for alternative wire exit or for affixing the
lamp to a surface or wall

10. The lamp and projection device according to Claims 1 to 9 where a lens is supported in a lens holder tightly between vertical struts in the side-casing and
5 connected through a punched groove in a side face to a control button to enable controlled vertical movement of the lens for focusing.
11. The lamp and projection device according to Claims 1 to 10 whereby recessed regions passing almost all the way
10 through the cube side faces are used to provide stronger areas of illumination or shadows for projecting ornamental lettering or symbols from the cube sides.
12. The lamp and projection device according to claims 1 to 11 supporting digital means comprised of a digital
15 micro mirror device and associated light filters, lenses, rotating colour wheel and an electronic control system
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13. The lamp and projection device according to claims 1 to 12 in combination with external connector sockets and connector slots to support removable digital data media
25 for photograph or video content such that the overall device forms a digital photo projector cube
14. The lamp and projection device according to claims 1 to 13 where said overall device forms a digital projector
30 cube suitable for video, gaming and computer display output

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15. A lamp and projection device comprising a lamp body consisting of six identical modular and interlocking faces assembled by means of protrusions and recesses on opposed edges to form an overall cube with hinged top face lid that contains a mirrored inside surface and is capable of reflecting an image at various angles and acts to turn the device on by means of a micro-switch when opened, where said faces contain moulded support structures and grooves for providing rigidity to the overall device and for supporting parts of an illumination and slide projection system that consists of a folded sheet bulb holder, bulb, reflective mirrors, slide, condenser lens and movable lens holder, electrical transformer and switch components.

16. The ornamental design for a lamp and projection device according to Claims 1 to 15 and described and illustrated herein;

AMENDED CLAIMS

[(received by the International Bureau on 09 May 2005 (09.05.05);
original claims 1-16 replaced by amended claims 1-16 (4 pages)]

- 5 1. A lamp and projection device comprising:
- a lamp body consisting of six substantially identical
 faces assembled to form a cube;
- 10 one of said faces being a hinged top face lid with
 interior mirrored surface capable of reflecting and
 projecting an image at various angles from vertical to
 horizontal;
- 15 support structure for supporting an imaging device and
 parts of an illumination and projection system; and
- an illumination and projection system consisting of at
 least one lamp or light-emitting unit, a plurality of
20 reflecting mirrors, at least one moveable condensing
 lens, and an electrical transformer and switch.
2. The lamp and projection device according to claim 1
 wherein said six substantially identical faces are
25 modular interlocking faces
3. The lamp and projection device according to claims 1 to
 2 where said imaging device is a removable single slide
- 30 4. The lamp and projection device according to claim 1
 where said imaging device is a digital means, such as a

transparent LCD panel, LCOS panel, Digital micro-mirror or other digital imaging light engine

5. The lamp and projection device according to claims 1 to 4 where said faces are identical and contain recesses and protrusions at opposed edges such that they can be assembled by rotating appropriately and interlocked with similar parts in a cube arrangement.
6. The lamp and projection device according to Claims 1 to 5 where said faces contain an internal support structure of struts and grooves for fixing the parts of the illumination system where such grooves support various parts or are not used depending on their rotation and position as a cube face.
7. The lamp and projection device according to Claims 1 to 6 where said faces are formed from a semi-translucent material so as to provide soft illumination through the cube faces, and easily formed by injection moulding means.
8. The lamp and projection device according to Claims 1 to 7 where a micro-switch is used to turn the device on or off as the top hinged lid is opened
9. The lamp and projection device according to Claims 1 to 8 whereby a folded and punched metal sheet is used to support the bulb unit and provide suitable heat dispersion and venting.

10. The lamp and projection device according to Claims 1 to 9 where said cube faces contain recessed grooves suitable for being punched through during manufacture or during installation to create holes or grooves suitable for alternative wire exit or for affixing the lamp to a surface or wall
11. The lamp and projection device according to Claims 1 to 10 where a lens is supported in a lens holder tightly between vertical struts in the side-casing and connected through a punched groove in a side face to a control button to enable controlled vertical movement of the lens for focusing.
12. The lamp and projection device according to Claims 1 to 11 whereby recessed regions passing almost all the way through the cube side faces are used to provide stronger areas of illumination or shadows for projecting ornamental lettering or symbols from the cube sides.
13. The lamp and projection device according to claims 1 to 12 supporting digital means comprised of a digital micro mirror device and associated light filters, lenses, rotating colour wheel and an electronic control system
14. The lamp and projection device according to claims 1 to 13 in combination with external connector sockets and connector slots to support removable digital data media for photograph or video content such that the overall device forms a digital photo projector cube

15. The lamp and projection device according to claims 1 to
14 where said overall device forms a digital projector
cube suitable for video, gaming and computer display
output

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16. A lamp and projection device comprising a lamp body
consisting of six identical modular and interlocking
faces assembled by means of protrusions and recesses on
opposed edges to form an overall cube with hinged top
face lid that contains a mirrored inside surface and is
capable of reflecting an image at various angles and
acts to turn the device on by means of a micro-switch
when opened, where said faces contain moulded support
structures and grooves for providing rigidity to the
overall device and for supporting parts of an
illumination and projection system, and an illumination
and projection system that consists of a folded sheet
bulb holder, bulb, reflective mirrors, slide, condenser
lens and movable lens holder, electrical transformer
and switch components.

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